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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,135	08/20/2003	Greg E. Ford	02-ASD-334 (EM)	5329

200 7590 01/27/2010
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EXAMINER

FOX, JOHN C

ART UNIT	PAPER NUMBER
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3753

MAIL DATE	DELIVERY MODE
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01/27/2010

PAPER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte GREG E. FORD and HAROLD L. BOWMAN

Appeal 2009-005710
Application 10/644,135
Technology Center 3700

Decided: January 27, 2010

Before DEMETRA J. MILLS, LORA M. GREEN, and STEPHEN WALSH,
Administrative Patent Judges.

WALSH, *Administrative Patent Judge.*

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134(a) (2002) from a final rejection of claims 1-18 and 20.¹ We have jurisdiction under 35 U.S.C. § 6(b) (2002). We affirm.

¹ Claim 19 has been canceled. (App. Br. 1-2).

STATEMENT OF THE CASE

The claims are directed to an electric fluid servo valve assembly and a method of making the assembly.

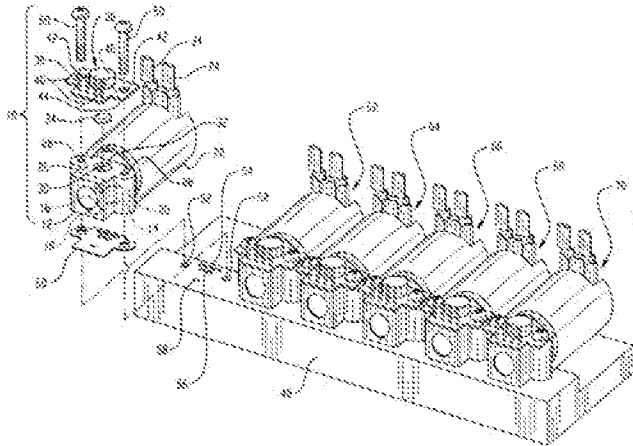
Claims 1, 10 and 15 are the only independent claims in the application.

Claim 1 reads as follows:

1. A electric fluid servo valve assembly comprising:
 - (a) a solenoid valve body having a fluid inlet passage, a fluid outlet passage, a pressure sensing port communicating with said outlet passage, and an obturator disposed therein that is moveable for controlling flow between said inlet passage and outlet passage upon connection of said inlet passage to a source of fluid;
 - (b) an electric actuator disposed with said valve body and operable upon electrical energization for affecting movement of said obturator; and
 - (c) a circuit board with a pressure sensor disposed thereon, said circuit board having a sensing aperture and being disposed over said pressure sensing port in said valve body such that said sensing aperture in said circuit board is aligned with said pressure sensing port.

(App. Br. 8, Claims App'x.).

Figure 1 from the Application, reproduced below, illustrates one embodiment of the claimed electric fluid servo valve assembly. (Specification [0008]-[0009]).



{Figure 1 illustrates a perspective view of the electric fluid servo valve assembly of the present invention. (*Id.*).}

THE EVIDENCE

The Examiner relies upon the following as evidence in support of the rejections:

Hilberer	DE 19839843 A1	Mar. 09, 2000
Hilberer	US 6,817,247 B1	Nov. 16, 2004

THE REJECTIONS

The following rejections are before us for review:

Claims 1-18 and 20 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Hilberer.

Appellants do not argue the claims separately. Therefore, we select independent claim 1 to decide the appeal. *See* 37 C.F.R.

§ 41.37(c)(1)(vii)(2006). Accordingly, the remaining claims stand or fall with claim 1.

ISSUE

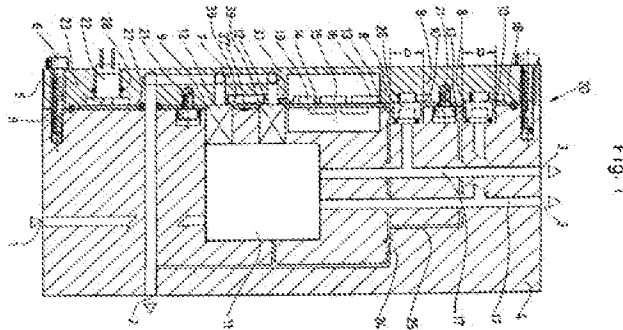
Have Appellants established that the Examiner erred in finding that the prior art anticipated an electric fluid servo valve assembly comprising a solenoid valve body having a pressure sensing port that is aligned with the sensing aperture in the circuit board, as claimed?

FINDINGS OF FACT

1. Hilberer DE 19839843 A1 corresponds to Hilberer US 6,817,247 B1 (“Hilberer”) issued on Nov. 16, 2004. (Final Rejection, Sep. 6, 2007, p. 2; App. Br. 3).²

2. Hilberer described a pressure control device for vehicles comprising a control device, a mechanical, pneumatic and/or hydraulic element and at least one sensor and/or at least one actuator. (Hilberer, Abstract).

3. Hilberer Figure 1 is reproduced below:



{Figure 1 shows a schematic representation of an embodiment of a casing according to Hilberer’s invention. (*Id.* at 3:50-51).}

² Appellants and the Examiner cite to US ‘247 in lieu of an English translation for DE ‘843.

4. Hilberer disclosed that “[t]he pressure control device comprises the housing formed by the housing bottom part 4 and the control device cover 5.” (*Id.* at 4:4-6).

5. Hilberer taught “[t]he housing bottom part 4 is a valve block.” (*Id.* at 4:7-8).

6. Hilberer’s valve block had a pressure medium feeding connection 1, a pressure medium return flow connection 2 and outlet connections. (*Id.* at 4:8-11).

7. A mechanical control and regulating unit 11 was provided in Hilberer’s valve block and was connected with solenoid valves 12. (*Id.* at 4:12-14).

8. Hilberer disclosed that the valve block had recesses into which pressure sensors 8 were fitted. (*Id.* at 4:14-16).

9. Hilberer disclosed that the components of the control device 20 were arranged on a printed circuit board 27. (*Id.* at 4:22-24; 7:10).

10. Hilberer disclosed that “[t]he holes in the printed circuit board can also be called printed circuit board openings 9 which have a diameter D for the sensors.” (*Id.* at 4:28-31.)

PRINCIPLES OF LAW

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987).

It is well settled that “claims in an application are to be given their broadest reasonable interpretation consistent with the specification and that claim language should be read in light of the specification as it would be

interpreted by one of ordinary skill in the art.” *In re Sneed*, 710 F.2d 1544, 1548 (Fed. Cir. 1983).

ANALYSIS

The Examiner found that Hilberer “shows a valve system with solenoid valves and pressure sensors 8 mounted with a circuit board 37 [sic, 27] and sealed with an o-ring 13.” (Final Rejection, Sep. 6, 2007, p. 2; Ans. 3, correctly identifying circuit board 27). The Examiner found that Hilberer “discloses that housing member 4 is a valve block ... which fully meets the recitation of a valve body.” (Final Rejection, p. 3)(citing Hilberer 4:7-8). The Examiner found that Hilberer’s block 4 “has an inlet, outlet, pressure sensing port in communication with the outlet, electromagnetic valve, a pressure sensor in fluid communication with the sensing port and a circuit board associated with the sensor.” (*Id.*).

According to the Examiner, “[t]he circuit board is shown with an aperture for the pressure sensor, and it is inherent that the sensors include an aperture in that the sensor mechanism must be exposed to the fluid in order to register its pressure.” (*Id.*).

Appellants contend that “[t]he valve block 4 in Hilberer does not disclose or suggest the solenoid valve body recited in independent claim 1.” (App. Br. 4). According to Appellants, “[o]ne of ordinary skill in the art would not have considered a manifold the same thing as a solenoid valve body because the solenoid valve 12 itself has its own body and because the manifold 4 is a separate and distinct component from the solenoid valve 12.” (*Id.*). Therefore, Appellants assert, a skilled artisan would have “interpreted the term ‘valve body’ to simply mean a body of the valve, not an entire manifold in which the valve resides.” (*Id.*).

This argument is not persuasive. The Specification does not define a solenoid valve body. Nor have Appellants provided any evidence, e.g., a declaration or a supplemental reference, that a person of ordinary skill in the art at the time the invention was made would have interpreted the valve body “to simply mean a body of the valve,” as Appellants contend. (*Id.*) Claim 1 recites “a solenoid valve body having a fluid inlet passage, a fluid outlet passage, a pressure sensing port communicating with said outlet passage, and an obturator disposed therein” (App. Br. 8, Claims App’x.). Thus, the Examiner reasonably interpreted the solenoid valve body to broadly describe a structure that houses the solenoid valve and provides the additionally claimed features of that housing. It is the Applicants’ burden to precisely define the invention, not the PTO’s. *In re Morris*, 127 F.3d 1048, 1056 (Fed. Cir. 1997).

We agree with the Examiner that Hilberer described a valve block 4 housing the solenoid valve and having each of the additionally claimed elements. Appellants have not established otherwise. Therefore, Hilberer anticipates the claimed solenoid valve body.

Appellants also contend that Hilberer failed to disclose “an assembly where the pressure sensing port of a valve body is aligned with the sensing aperture of the circuit board, which is in turn aligned with the pressure sensor.” (App. Br. 4). Appellants assert that, in the art, the term “aligned” means “arranged in a line” and that Hilberer “does not show or teach arranging the sensors in a line with the valves.” (*Id.* at 5).

This contention is also unpersuasive. First, claim 1 does not require arranging sensors in a line with valves. Claim 1 recites “a circuit board with a pressure sensor disposed thereon, said circuit board having a sensing

aperture and being disposed over said pressure sensing port in said valve body such that said *sensing aperture in said circuit board is aligned with said pressure sensing port.*” (App. Br. 8, Claims App’x)(emphasis added). Second, Hilberer described that the sensing aperture in the circuit board is aligned with the pressure sensing port. *See* FF10. Further, as the Examiner explained, “the sensors of the [claimed] valve are also remote from the solenoid valves,” (Advisory Action, p. 2), which the Appellants have not contradicted.

CONCLUSION OF LAW

Appellants have not shown error on the part of the Examiner. The evidence supports the Examiner’s finding of anticipation.

DECISION

The Rejection of claims 1-18 and 20 under 35 U.S.C. § 102(b) as being anticipated by Hilberer is AFFIRMED.

Appeal 2009-005710
Application 10/644,135

TIME PERIOD

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv) (2006).

AFFIRMED

alw

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